

## ABSTRACT OF THE DISCLOSURE

A control device and a method of stopping the spindle motor or an optical disc system. The control device primarily includes an optical disc control chip, a motor driving circuit and a spindle motor. The optical disc control chip generates and 5 delivers a spindle motor control signal to the motor driving circuit for driving the spindle motor into rotation. During a first period, the spindle motor control signal level is controlled to produce the largest reversing torque permitted by the spindle motor for braking purpose. During a second period, the spindle motor control signal level decreases gradually to approach to a lock level that is smaller than that for actuating the 10 spindle motor, so that the reversing torque is also decreasing gradually. During a third period, the spindle motor control signal at a level between the lock level and a motor stoppage level indicative of the spindle motor remaining stationary is applied to the motor driving circuit so that a locking torque which has the same rotation direction with that for read-/write-operations is derived in the spindle motor. The locking torque is 15 controlled at a level less than that for actuating the spindle motor again. Finally, the spindle motor remains stationary after the third period terminates.